

## **ABSTRACT**

The present invention provides an all-ceramic diffuser assembly that includes a diffuser element formed of a porous ceramic material and a base formed of a non-permeable ceramic material. The base includes a peripheral undercut shoulder portion that overlaps a perimeter edge of the diffuser element to ceramically bond the diffuser element to the base. A conduit is formed in a fitting portion of the base for directing a stream of gas or liquid that is capable of diffusing through the diffuser element into a chamber formed between an inner surface of the diffuser element and a floor portion of the base. The present invention also provides a method of forming the diffuser assembly.